

IN THE CLAIMS:

Claims 1-21 (cancelled).

22. (new) An apparatus to detect a condition in the environment comprising:

a light emitting source to direct light at a gas sensor and a light receiving device to detect the light passing through the sensor, a capacitor coupled to the light receiving device, the sensor absorbing carbon monoxide;

a smoke sensor.

control circuitry selectively activating the light emitting source to cause the voltage of the capacitor to increase, the control circuitry responds to capacitor voltage, the control circuitry also responds to an output from the smoke sensor;

an alarm energizable to produce a first pattern in response to sensed carbon monoxide, and to produce a second pattern in response to sensed smoke;

a circuit to supply a substantially constant current to the light emitting source, at least when the source is activated, to maintain the output of the light emitting source at a substantially constant level.

23. (new) An apparatus as in claim 22 where the circuit comprises an emitter follower.

24. (new) An apparatus as in claim 23 where the gas sensor comprises a biomimetic element.

25. (new) An apparatus as in claim 24 where the smoke sensor includes an ionization chamber.

26. (new) An apparatus as in claim 24 where the light emitting source comprises a light emitting diode.

27. (new) An apparatus as in claim 22 which includes a comparator coupled between the smoke sensor and the control circuitry.

28. (new) An apparatus as in claim 23 where the control circuitry includes a programmed processor and circuitry to output a plurality of audible output patterns.

29. (new) An apparatus as in claim 23 where the emitter follower comprises a transistor with an emitter coupled to at least a fixed resistor.

30. (new) An apparatus as in claim 23 where the control circuitry responds to increasing voltage on the capacitor to establish a sampling count.

31. (new) An apparatus as in claim 23 where the control circuitry establishes a plurality of sample time values for establishing the presence of a carbon monoxide alarm condition.

32. (new) An apparatus comprising:

a gas sensor having a light emitting source and a light receiving device;
a smoke sensor;

control circuitry coupled to the sensors, the control circuitry determining at least if a predetermined smoke condition has been sensed; and

an alarm coupled to the control circuitry, energizable to produce a pattern in the presence of the predetermined smoke condition;

the control circuitry includes first circuitry coupled to the light emitting source, where the first circuitry selectively activates the light emitting source by providing a substantially constant current to the source to maintain the light output of the source at a substantially constant level even in the presence of changes in applied voltage.

33. (new) An apparatus as in claim 32 where the first circuitry includes a transistor having a collector, the light emitting source is coupled to the collector.

34. (new) An apparatus as in claim 33 where the transistor includes an emitter and is configured with a resistor coupled thereto, as an emitter follower.

35. (new) An apparatus as in claim 33 which includes second circuitry coupled to the light receiving device, the light receiving device having a substantially constant second current induced therein during at least selected time intervals.

36. (new) An apparatus as in claim 35 where the second circuitry includes a capacitor and the second current charges the capacitor which in turn exhibits, at least intermittently, a substantially linearly increasing output voltage.

37. (new) An apparatus as in claim 32 where the control circuitry includes a programmed processor.

38. (new) An apparatus as in claim 32 where the alarm is activatable by the control circuitry to produce a different pattern in the presence of a predetermined gas condition.

39. (new) An apparatus to detect a condition in the environment comprising:

a light emitting source to direct light at a gas responsive sensor and a light receiving device to detect the light passing through the sensor, the gas responsive sensor changing optically upon exposure to carbon monoxide;

a capacitor coupled to the light receiving device;

a smoke sensor;

control circuitry, coupled to the emitting source, the capacitor and the smoke sensor, where the control circuitry selectively activates the light emitting source to cause the voltage of the capacitor to increase, at least intermittently; and

the control circuitry further including first circuitry to cause the emitting source to emit a substantially constant light even in the presence of a variation in applied voltage.

40. (new) An apparatus as in claim 39 where the first circuitry includes an emitter follower to provide a substantially constant current to the emitting source, at least when the source is activated.

41. (new) A method of monitoring a region comprising:

- a) sensing the presence of airborne smoke in a selected region;
- b) determining if sensed smoke corresponds to an alarm condition, and, responsive thereto, generating an audible smoke indicating alarm;
- c) generating a substantially constant current, at least intermittently;
- d) converting the current to a substantially constant level of radiant energy;
- e) directing the radiant energy toward a gas responsive material, and sensing radiant energy that has passed through the material;
- f) converting the sensed radiant energy to a corresponding current; and
- g) converting the corresponding current to a varying voltage.

42. (new) A method as in claim 41 where the determining step includes comparing sensed smoke to a predetermined value to establish the presence of an alarm condition.

43. (new) A method as in claim 42 where converting the corresponding current to a varying voltage includes converting that current to a linearly increasing voltage, at least intermittently.

44. (new) A method as in claim 41 where c)-g) are repeated on a periodic basis for determining the presence of a selected gas condition.

45. (new) A method as in claim 43 including a discharging sequence prior to linearly increasing that voltage.

46. (new) A method as in claim 41 where converting the corresponding current to a varying voltage includes, charging a capacitor, at least intermittently, with that corresponding current.

47. (new) A method as in claim 46 where the charging current generates a substantially linearly increasing voltage.

48. (new) A method as in claim 44 which includes producing a plurality of periodic, linearly increasing voltages.

49. (new) A method as in claim 48 which includes providing a capacitor across which the plurality of linearly increasing voltages is established.